Project 2: University of Utah Southern Utah Field Station
Entrada Ranch, Delores River, Moab, Utah

University of Utah, College of Architecture + Planning
Studio III– Fall 2007
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Introduction:

Project 2 is an academic teaching and research field station at Entrada Ranch near Moab, Utah in Southeastern Utah. The learning objectives for this project are two fold:

~ ***Land Ethics:*** develop an understanding of the role of and a sensitivity to landscape as site in architectural design.
~ ***Material Aesthetics:*** research and develop materially and tectonically rich architectural responses to the given program and site.

Background:

Securing a sustainable environmental future will require innovative social, technological, and scientific solutions of the types that rightfully ought to be the central focus of the university educational and research activities. The University of Utah is in the process of developing an interdisciplinary environmental program and sees the purchase of Entrada Ranch as a catalyst for the emergence of a strong, cohesive and collaborative program in environmental education and research on campus.

Opportunities to accomplish the mission of the university: teaching, research and community outreach are abundant at Entrada Ranch. Because the Ranch spans 3 miles, it affords many opportunities for different landscapes and terrains. Virtually all aspects of University education could find an opportunity at Entrada Ranch including, art, writing, geology, hydrology, anthropology, architecture, biology and other sciences. The Ranch has the potential for serving as a location for both short-term (weekend) and long-term (weeks) educational experiences. Research teams are currently utilizing the Ranch for monitoring data with equipment long-term.

Site Description:

The Entrada Ranch is a red rock location 40 miles north of Moab, Utah. The ranch includes arid landscapes and 2.5 miles of the Dolores River several miles upstream of where the Colorado and the Dolores River converge. The potential long-term value to the University as a permanent, secure, and remote facility for education, research and teaching is unparalleled. The university is currently in the process of negotiating a purchase of the ranch for teaching and research. This studio should be a think tank for envisioning possible future developments for the ranch and our work may assist in the university fund raising efforts for the future of the field station.

The 400 acre ranch occupies flat land on the south side of the Dolores River is completely surrounded by federal Bureau of Land Management (BLM) lands. The ranch controls access to an additional 2,000 acres of BLM lands in 3 different box canyons that open onto ranch lands. The Entrada Ranch has the three most important and essential infrastructure features for any remote facility: excellent road access, electrical power, and culinary water. Originally homesteaded in the late 1860's, the ranch has had a varied history. It appears that the primary use over the past two or more decades has been as a guest ranch. Agricultural activities have been minimal in recent times, with only a modest attempt made to ensure water rights by installing irrigation pipe and raising a native-plant crop. Several houses and storage structures are located on the property. The U.S. Geological Survey (USGS) has a permanent gauging station on site with 50+ years of continuous recordings.

You are expected to do a thorough site analysis of the ranch including solar exposure, rainfall, snowfall, wind, temperature, and flooding.




The Entrada Ranch spans the entire riparian corridor
as shown in this image (~3 miles of Dolores River)
and provides the only access to the three box canyons


Tool Shed
Dalton House
Deck House
Sleeping Shack
Shed
Water tower
Susan House
Barn
Kiosk & Outhouse
below
(not seen here)

Program:

The Entrada Field Station is envisioned as a place where students and faculty can carry out field research, conduct field-based classes in sciences and engineering, or hold workshops and in-residence programs for writers and artists. Field based work implies the majority of time at the station will be spent working in the environment and very little time within the quarters of the buildings themselves. Therefore a strong connection between landscape and building must be maintained. In addition, the project is envisioned as a low impact, sustainable intervention that utilizes passive systems and responds to the regional environment, climate and sun exposure.

According to the university program, the design of the buildings will commence in January of 2008 and construction is envisioned beginning in the summer 2008 – December 2008. Buildings that are slated to be removed are the existing research building and the existing outhouse on site. (see map) The new research facility will replace the existing. Existing houses will remain for housing faculty and artist in resident programs and storage sheds/barns will also remain on site. Growth will continue for the next 20 years and this phase is seen as a building block transition to a much more significant field station development in the future.

The following functions must be included: (you may combine the functions however you deem appropriate)

Community Building:

Lobby/Information =	200 sq. feet
32 bed bunkhouse, 8 rooms (4 beds/rm.) @ 120 sq. feet each =	960 sq. feet
2 instructor rooms (2 beds/rm.) @ 120 sq. feet each =	240 sq. feet
2 bathrooms w/ showers (male/female) @ 250 sq. feet each =	500 sq. feet
Kitchen (cooking/food storage) =	450 sq. feet
Dining/Classroom =	800 sq. feet
Outside Dining/Classroom =	800 sq. feet
Storage =	400 sq. feet
Subtotal	4350 sq. ft.

Research and Teaching Building:

Laboratory (open space w/ lab benches and cabinets) =	1200 sq. ft.
3 Offices @ 180 sq. feet each =	540 sq. ft.
2 bathrooms unisex @ 150 sq. feet each =	300 sq. ft.
Subtotal	2040 sq. ft.

Artist Residence Building:

20 beds, 10 rooms (2 beds/rm.) @ 100 sq. feet each =	1000 sq. feet
1 communal space adjacent to bedrooms =	500 sq. feet
2 bathrooms w/ showers (male/female) @ 250 sq. feet each =	500 sq. feet
Subtotal	2000 sq. feet
Total =	**8390 sq. feet**

Additional Program Items:

- Outdoor Sleeping/Gathering/Recreation: An outdoor space with a strong identity is needed for formalized outdoor gathering in good weather. This space should be strongly associated with the recreational space. It may also have strong relationships with other important spaces of the program, especially those associated with group activities. It may contain some seating, a place for a fire, a teaching pavilions and areas for camping. The design of this exterior environment is at your discretion.

- Parking: Space should be provided to park about 30 cars separated from the complex, but within short walking distance to it.

- Site Guidelines: The retreat is primarily a walking, pedestrian environment, but distances between buildings need not be minimized. Grades and surface finishes should be planned for comfortable pedestrian movement. Connection to site amenities including field research sites via a trail system need to be developed.

- ADA: All new construction must be ADA accessible including paths up to buildings.

Schedule:

Monday, October 22	Project Debriefing and Section Discussions – Ryan Smith
Wednesday, October 24	Talk by Jim Ehleringer* 2-3 PM Sustainability Film by Chris Lobas 3-5 PM
Friday, October 26	Trip to Entrada. Driving directions and list of items to bring on the web. You need to leave by 11:00 AM to arrive by 3:30 PM.
Wednesday, October 31	Precedent Study Review as sections
Friday, November 2	Site Analysis Study Review as sections
Friday, November 16	Mid-project 2 Review in Bailey Gallery, walk around review 2:00 – 5:00 PM
Wednesday, December 12	Project 2 Final Review in Bailey Gallery, 1:00 – 5:00 PM

Note: Studio Switch Day TBA

*Jim Ehleringer is a Professor of Biology at the University of Utah where he runs lab that investigates plant ecology and global change, mechanisms of plant adaptation to contrasting environments, carbon balance, photosynthesis, plant productivity, leaf energy balance, and water relations. Professor Ehleringer has led the university effort to secure Entrada Ranch as a field station.

Entrada Ranch Site Visit:

Schedule:

Friday -

11:00 am	Leave Salt Lake City in carpools
3:30 pm	Arrive at Entrada Ranch, Set up camp
5:00 pm	Dinner & Discussion
8:00 pm	Campfire
10:30 pm	Bed Time

Saturday –

8:00 am	Breakfast (By Professors)
9:00 am	Tour of Site
12:30 pm	Snack Lunch
1:30 pm	Section Discussions
4:00 pm	Personal time
6:30 pm	Dinner as a group (section assignments)
8:00 pm	Campfire
10:30 pm	Bed Time

Sunday –

8:00 am	Snack Breakfast
8:30 am	Clean up, pack up
9:00 am	leave

What to Bring -

Clothing: -Hat
-Sunscreen
-Hiking boots
-Plenty of socks
-Long pants
-Jacket and sweater
-Clothing for 3 days
-hat and gloves
(It will be cold!)

Sleeping: -Tent,tarp, sleeping bag, pillow and pad
-There are 3 houses, a sleeping shack and a one sleeping kiosk on the property. The faculty will stay in the Susan House, and the other 4 indoor lodging accommodations are open to whoever would like to stay in them. If you would like to sleep indoors, please contact me via email and I will make assignments.

Toiletry: -Towel (this is for good measure, although we will not be showering)
-Port-a-potties will be on site
-Toothbrush, Toothpaste
-Deodorant, etc.
-Role of toilet paper
-Small First Aid Kit

Food: -Breakfast on Saturday morning will be provided by the faculty. Dinner will be by section assignment on Saturday night. All other meals will be organized by section.
-1 gallon of water per person (Fresh water is available but is limited well water)

Other: -Back Pack for hikes, etc.
-Sketch Book and pen(s)/pencil(s)
-Digital Camera
-Open Mind

Site Visit Guidelines for Students:

1) No Pets, bikes, motorcycles, ATVs, guns, drugs, alcohol at Entrada Ranch. No smoking in the cabins.

2) Do not travel alone. On each hike or trip, pair in groups to ensure safety. This is an animal filled, rocky, and dehydrating region – staying in groups ensures yours and others safety.

3) An emergency telephone is available on site. Please fill out the Student Information Form and the University Travel Waiver Form attached to this packet and return to Ryan Smith on Wednesday, October 24, 2007 in class.

4) All garbage must be bagged and removed upon departure (pack it in, pack it out). Leave it better than when we arrived.

5) Potable water is onsite in the cabins and on the outside of buildings; please use your own water and conserve the well water as its recharge flow is slow.

6) Vehicles are limited to existing roads and driveways – no exceptions! Do not drive down the valley, only near cabins on marked roads. Do not drive past the barn parking area.

7) If you are assigned to an indoor location to sleep, please note that you should bring your own sheets/blankets/pillow/sleeping bag. Also brings a small brush or broom to dust off the mattresses in the cabins. Leave cabins neat and clean when leaving the ranch. Decon mice repellant is currently found in the cabins.

8) No swimming. No exceptions.

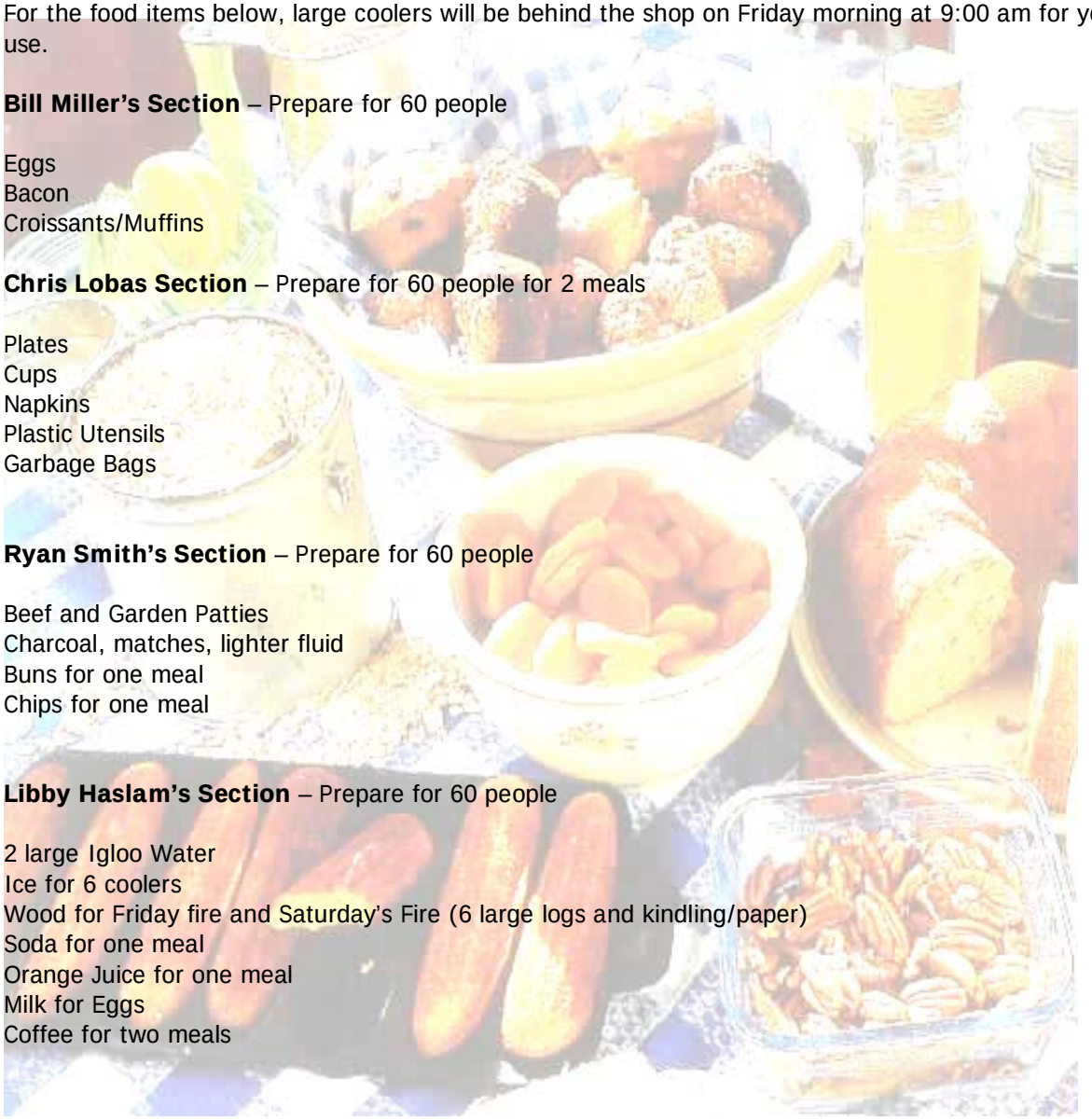
9) Do not tamper with onsite power tools in the barn.

10) Collection of rock, soils, and botanical samples should be done in such a manner as to minimize environmental and aesthetic impacts on the ranch and adjacent lands.

Travel: Each section will carpool to take as few cars as possible. Please organize yourselves so that there are no less than 4 people per car. Carpooling will be organized by section. It is recommended that you try to travel in a high clearance car or SUV as the dirt road into the Ranch is rough.

Assignments for site visit:

For the food items below, large coolers will be behind the shop on Friday morning at 9:00 am for your use.



Bill Miller's Section – Prepare for 60 people

Eggs
Bacon
Croissants/Muffins

Chris Lobas Section – Prepare for 60 people for 2 meals

Plates
Cups
Napkins
Plastic Utensils
Garbage Bags

Ryan Smith's Section – Prepare for 60 people

Beef and Garden Patties
Charcoal, matches, lighter fluid
Buns for one meal
Chips for one meal

Libby Haslam's Section – Prepare for 60 people

2 large Igloo Water
Ice for 6 coolers
Wood for Friday fire and Saturday's Fire (6 large logs and kindling/paper)
Soda for one meal
Orange Juice for one meal
Milk for Eggs
Coffee for two meals